

INTERIOR HORT

...for interiorscape professionals

Center for Urban Horticulture
University of Washington

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Cooperative Extension
Washington State University

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INTERIORSCAPE FORUM:

Potting Soils—Physical and Chemical Properties and Labeling

Date : Tuesday, September 6
Time : 7 to 9 p.m.
Location : Center for Urban Horticulture
Instructor : Dennis R. Pittenger

In 1984, Dennis Pittenger evaluated samples of 15 widely available potting soil mixes. Several were found to possess unsatisfactory chemical or physical properties. He concluded that potting soil label information was inadequate.

Find out how to identify and manage potting soil problems. This forum will consist of a one-hour presentation by Mr. Pittenger followed by a group discussion. Afterwards, notes from the forum will be typed and sent to all participants. Refreshments will be served.

Dennis Pittenger is urban horticulture specialist with the University of California Cooperative Extension. He wrote "Potting Soil Label Information is Inadequate," which appeared in *California Agriculture*.



Registration Form: Interiorscape Forum

Registration Fee
Before August 26 \$7.00
After August 26 \$10.00

Firms using purchase orders must make prior registration arrangements.

Make checks payable to the University of Washington; no bank cards.

Portion of fees may be used for refreshments and hosting speakers.

Receipts will *not* be returned by mail; they will be available at the door.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE (DAY) _____ PHONE (EVE) _____

Mail payment and registration to: Urban Horticulture Program, University of Washington, GF-15, Seattle, WA 98195

For more information, please call 545-8033.

Springtails and Fungus Gnats

George Pinyuh
Cooperative Extension
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One of the more common situations that houseplant enthusiasts encounter involves a little grayish or white critter called a springtail. Springtails are most frequently noticed at watering time, especially when the water rises up above the soil surface for a time. It is not uncommon to see large numbers of these little fellows jumping or hopping fran-

tically about on the surface of the water. As the water infiltrates the soil, they resume their more normal and leisurely pace, quietly grubbing about in the soil.

These springtails, or collembolas, are actually harmless little primitive insects whose major function in life is to help break down organic matter. They feed on decaying organic material and are one of the important links in nature's recycling process. All collembolas are quite small and wingless, but they do have a rather peculiar spring-like organ on their bellies which enables them to jump. In fact, considering how little they are, they can jump some pretty good

distances.

If you've had occasion to notice springtails in your potted plants, they're probably in residence because you used some garden soil in making up your potting medium or perhaps you summered your plant outdoors at some point.

Springtails don't cause any harm to houseplants or to the soil. Actually they are beneficial since they consume and excrete organic matter thus helping to provide the nutrients locked up in it to your plants' roots. Also, since they do a lot of burrowing, they are instrumental in helping to aerate

the soil which in turn allows excess water to percolate on down through and out. More oxygen then is able to fill the soil's pore spaces, thus creating a healthier environment for not only plant roots but the soil's microflora.

Unless the population of these fellows builds up to huge numbers, I'd advise that you let them alone to do the job they're there to do. Of course, large numbers of them spilling out on to your living room furniture may have to be controlled. Allowing the soil to dry out a bit more between waterings may help, as well as the use of aerosol sprays registered for use indoors on houseplants.

Another beast, not quite so charming as collembola, that you may occasionally encounter in and around houseplants is the fungus gnat. These are little flies that are often seen flying about in the vicinity of houseplants or up against the windows. To some extent they remind one of fruit flies and may be mistaken for them.

The larvae of fungus gnats are smallish maggots that live in the soil of houseplants and, to my mind at least, are somewhat more disconcerting than springtails. They have occasionally been implicated in damage to plants, especially young plants. Although these maggots tend to feed on decaying organic matter, they probably also feed on the tender young roots of plants. If there are enough of them in a potted plant's soil, particularly if it's a young plant, they could cause some serious damage or even its death.

They may also be responsible for the rot that sometimes attacks succulent plants like Christmas cactus or jade plants. Their feeding on the roots or stems at the soil line could open the plant's tissues up to invasion by certain rot organisms, even though the plants are not being overwatered.

To eliminate fungus gnats, it will be necessary to use a houseplant insecticide several times, because these sprays only kill the maggots and adults, not the eggs or pupal stages. Spraying the soil surface and plants once every five to seven days for a month or so should catch all of them.

In the future, to help avoid introducing these critters to your potting soil, it might be prudent to pasteurize any garden soil used in your potting mixes. Simply heat the soil so the temperature is held at 140°F. for 30 minutes.

INTERIOR HORT Editorial Staff:
Dr. John A. Wott
George J. Pinyuh
Van M. Bobbitt, editor

Plant Sensitivity to Mercury Vapors in the Air

"When severe leaf-drop on acclimatized *Ficus benjamina* occurs suddenly after installation or repainting, the paint formulation should be obtained to determine whether mercury is present . . . damage can occur to *Ficus* as much as a year later," according to Poole and Conover (1986, 1987). Damage to plants by mercury is not as prevalent today because its use is limited as other mildewcides are substituted for it. However, some paints still contain mercury, usually as phenylmercuric acetate (PMA). According to Poole and Conover, "Contacts with paint formulators indicate that mercury use is most common with formulators that service local commercial painting contractors and clientele. A commercial paint sold locally yielded a mercury vapor level of 0.030 mg/cubic meter during the first week." A Denver interiorscaper recorded 0.014 mg/cubic meter of mercury in a severely defoliating *Ficus* planting in a repainted lobby.

Of 14 genera tested by Poole and Conover, (*Aglaonema*, *Aphelandra*, *Brassaia*, *Colinia*, *Codiaeum*, *Crossandra*, *Dieffenbachia*, *Dizygotheca*, *Ficus*, *Kalanchoe*, *Polyscias*, *Rosa*, *Schefflera*, *Spathiphyllum*), only *Ficus* and *Dieffenbachia* were affected by paint containing mercury with the response being much greater with *Ficus* than with *Dieffenbachia*. *Ficus* experienced severe leaf drop within a week after placement in rooms painted with mercury-containing paints. Even after severe leaf drop, *Ficus* continued to produce new leaves, but these, too, soon dropped from the plant. *Ficus* in a room painted with paint containing more than twice the normal amount of mercury, lost leaves rapidly and eventually died. Lower leaves (more mature leaves) became chlorotic, then necrosis occurred.

The easiest way to solve the problem if mercury evolving paints have been used is to: 1) increase ventilation to dilute the mercury vapor concentration or 2) replace the *Ficus* with other plants such as schefflera and palms that tolerate mercury vapor.

Mercury vapor concentration can be determined by obtaining monitors manufactured by 3M Company, Occupational Health and Safety Products Division, Bldg. 230-B, St. Paul, MN 55133—telephone 1-800-328-1667 to determine the distributor nearest you. Price, including monitors and analysis, is approximately \$300 for a box containing 5 each 3M Mercury Vapor Monitor #3600.

Information from:

Poole, R. T. and C. A. Conover (Central

Florida Research and Education Center—Apopka, 2807 Binion Rd., Apopka, FL 32703). 1987. Monitoring mercury levels in the atmosphere. *Foliage Digest* 10(9):5, September 1987.

Poole, R. T. and C. A. Conover, 1986. Interiorscaper's mystery solved by researchers. *Florida Foliage*, October 1986, pp. 28-31.

Reprinted from *Ornamentals Northwest Newsletter* (September-October 1987) 11(2): 8-9.

Susceptibility of Calathea to Helminthosporium Leaf Spot

Helminthosporium leaf spot, caused by the fungus *Bipolaris setariae*, sometimes infects the foliage plant *Calathea* during greenhouse production. Dr. A. R. Chase of the University of Florida tested several species and cultivars of *Calathea* to determine their relative susceptibility to helminthosporium leaf spot. He found considerable differences in susceptibility and rated the species/cultivars as follows:

- I. Highly Resistant
Calathea louisae 'Green Feather'
Calathea roseo-picta
- II. Moderately Resistant
Calathea makoyana 'Peacock Plant'
- III. Most Susceptible
Calathea insignis 'Rattlesnake'
Calathea argentea 'Vandenheckei'
Calathea argentea 'Silver Portrait'

Reference: Chase, A. R. 1987. Susceptibility of *Calathea* species and cultivars to *Bipolaris setariae*. *Journal of Environmental Horticulture* 5:29-30.

